

ABSTRACT

An audio tone-control circuit includes 4th-order low-pass, 4th-order band-pass, and 4th-order high-pass filter circuits. The 4th-order low-pass filter circuit has a first phase response and receives and filters an audio signal and generates a first output signal therefrom. The 4th-order band-pass filter circuit has a second phase response that is substantially equal to the first phase response and receives and filters the audio signal to generate a second output signal. The 4th-order high-pass filter circuit has a third phase response substantially equal to the first and second phase responses and receives and filters the audio signal to generate a third output signal. The audio-signal circuit also includes a combining circuit that combines the first, second and third output signals into a combined signal. Furthermore, the filter circuits may be 2nd-order filter circuits instead of 4th-order filter circuits.

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